

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A database management device managing information comprising required matters including an effective period as one data unit and preparing following data corresponding to the data when the effective period of the data expires, ~~which~~ comprising:

relevant information adding means for adding relevant information ~~mutually associated with the data~~ to both or either one of a specific data of which effective period expires and/or a following data corresponding to the specific data, the relevant information including an address for referring to the other data of the both; and

relevant information specifying means for specifying corresponding data referring to the address included in the relevant information of the data at the time of referring to the specific data or the following data.

Claims 2-5 (Cancelled)

6. (Currently Amended) A The database management device according to claim 1, further comprising:

effective period management means for storing the effective period and the reference information of data including the effective period associating each other and notifying of the expiration when the effective period expires; and

data control means for performing on the data specific processing due to the expiration of the effective period at receiving the notice from the effective period management means.

7. (Currently Amended) A The database management device according to claim 6, wherein the specific processing is to prepare the corresponding following data.

8. (Currently Amended) A The database management device according to claim 6, wherein the specific processing is to delete the data of which effective period expires.

9. (Currently Amended) A The database management device according to claim 6, in which the information containing the required matters includes the time information to prepare the following data before the effective period expires, ~~which~~ and further comprising:

update management means for storing the time information and the reference information of data including the time information associating each other and notifying to the effect that the time indicated by the time information has come; and

the data control means prepares the following data at receiving the notice from the update management means.

Claim 10 (Cancelled)

11. (Currently Amended) A The database management device according to claim 6, further comprising:

effective period extension means for storing the extension period information to extend the effective period and renewing the effective period of data of which effective period expires to the period indicated by the extension period information when the effective period expires.

12. (Currently Amended) A The database management device according to claim 6, further comprising;

searching order management means for setting the searching order of the following data in front of the data corresponding to the following data.

13. (Currently Amended) A The database management device according to claim 6, further comprising:

searching frequency monitoring means for monitoring the searching frequency of the following data and the data corresponding to the following data; and

the searching order management means changes the searching orders of the specific data and the following data according to the searching frequency.

14. (Currently Amended) A The database management device according to claim 2 ~~1~~, wherein the data are information to carry out the security communication on a network, and the effective period is that of the information.

15. (Currently Amended) A The database management device according to claim 14, wherein the information to carry out the security communication contains either one of an authentication algorithm, an encryption algorithm, an authentication key, or an encryption key.

16. (Currently Amended) A The database management device according to claim 15, wherein the data are SA (Security Association) applied to the IPSEC (Internet Protocol Security Protocol).

17. (Currently Amended) A database management method of managing information comprising required matters including an effective period as one data unit and preparing following data corresponding to the data when the effective period of the data expires, ~~which~~ comprising the steps of:

adding relevant information to both or either one of a specific data of which effective period expires and a following data corresponding to the specific data, the relevant information including an address for referring to the other data of the both; and

specifying corresponding data referring to the address included in the relevant information of the data at the time of referring to the specific data or the following data.

Claim 18 (Cancelled)

19. (Currently Amended) A computer readable storage medium storing a program for executing a computer for managing information comprising required matters including an

effective period as one data unit and preparing following data corresponding to the data when the effective period of the data expires, ~~which~~ comprising the steps of:

adding relevant information to both or either one of a specific data of which effective period expires and a following data corresponding to the specific data, the relevant information including an address for referring to the other data of the both; and

specifying corresponding data referring to the address included in the relevant information of the data at the time of referring to the specific data or the following data.

Claim 20 (Cancelled)

21. (New) The database management device according to claim 1, further comprising:

effective period management means for storing the effective period and a reference information which is a address of the data including the effective period associating each other and notifying of the expiration when the effective period expires; and

data control means for specifying the data based on the reference information and performing on the data specific processing due to the expiration of the effective period at receiving the notice from the effective period management means.

22. (New) The database management device according to claim 21, in which the information containing the required matters includes the time information to prepare the following data before the effective period expires, further comprising:

10/023,483

update management means for storing the time information and the reference information of data including the time information associating each other and notifying to the effect that the time indicated by the time information has come; and

the data control means prepares the following data at receiving the notice from the update management means before the effective period expires.